

# Exploring The Milky Way - Educator's Guide (Ages 16-18)



## At the end of these Night Sky activities students will understand:

- The Milky Way is a galaxy
- The Sun is one of many stars in the Milky Way Galaxy
- The Milky Way is a spiral galaxy

## Astronomy background information

The Solar System is located in a galaxy called the Milky Way which appears as a pale glowing lane extending up the sky. It gets its name from its milky appearance. The Sun is one of 200-400 billion stars in the Galaxy. All the stars we can see without telescopes are inside the Milky Way.

The centre of the Galaxy is so large that it extends through Sagittarius, Scorpius and Ophiuchus in our sky. The dark areas visible along the plane of the Milky Way are dusty regions which block the light from the stars behind them.

The Milky Way is in the shape of a flat spiral which bulges in the centre. The spiral arms are regions where dust and gas are more concentrated. The shape of the Milky Way was difficult to determine by visual observations. Astronomers compared the Milky Way to other galaxies and considered it best matched the shape of spiral galaxies such as Messier 51 and 101. Astronomers have now used radio telescopes to chart the Milky Way proving it is a spiral galaxy. The Milky Way is held together by the gravitational attraction of all the stars and other matter in the Galaxy.

## Night Sky App Essential Settings

Go to Night Sky Settings  and make sure the following Preferences are set.

### Turn On these Effects:

Real Sky Representation  
Environment Based Horizons  
Show Constellation Lines  
Stop Text and Lines Disappearing  
Enable Messier Objects

### Turn Off these Effects:

Daytime effect  
Show Satellites  
Show Trajectories and Orbits  
Show Ecliptic Line  
Show Glass Mythology

## Accessible Learning:

- Text size can be increased in the Preferences section
- Star numbers can be reduced by sliding two fingers down the screen

